

CLAIMS

What is claimed is:

SUB 17
1 1. A method of performing asynchronous transfer mode (ATM)
2 segmentation functions comprising the operations of:
3 receiving data to send;
4 segmenting the data to generate a plurality of ATM cells;
5 buffering the plurality of ATM cells in a memory device;
6 traffic shaping the buffered plurality of ATM cells; and
7 transmitting the plurality of ATM cells on a network.

1 2. ~~The method of claim 1 wherein the traffic shaping~~
2 further comprises:
3 examining a virtual channel and determining whether a cell
4 should be output at a given time; and
5 updating virtual channel information when a cell is to be
6 output at the given time.

1 3. ~~The method of claim 1 wherein the operation of~~
2 segmenting data is performed by a central processing unit (CPU) of
3 ~~a computer.~~

SUB 17
1 4. ~~The method of claim 1 wherein the traffic shaping of~~
2 data is performed by a central processing unit (CPU) of a
3 ~~computer.~~

1 *SWB*
2 *12/12/82* 5. A program storage device readable by a machine, tangibly
3 embodying a program of instructions executable by a machine to
4 perform method steps for segmenting asynchronous transfer mode
5 (ATM) data, the program comprises:

6 a first code section to instruct a CPU of a computer to
7 segment data to generate a plurality of ATM cells;

8 a second code section to buffer the plurality of ATM cells in
9 a memory device; and

10 a third code section to traffic shape the buffered plurality
11 of ATM cells.

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1 SUB
13 ABT 9. A method of performing asynchronous transfer mode (ATM)
2 reassembly functions comprising:
3 receiving in an uninterrupted stream a plurality of protocol
4 data units without interrupt in an input buffer, each protocol
5 data unit including a plurality of ATM cells; and
6 retrieving ATM cells from the input buffer until all data
7 corresponding to a payload data unit is retrieved and checking a
8 CRC to determine whether data was received without error.

1 10. The method of claim 9 further comprising:
2 dropping the payload data unit when the CRC indicates an
3 error.

1 11. The method of claim 9 further comprising:
2 copying a cell payload from the input buffer into a
3 reassembly buffer.

1 12. The method of claim 11 further comprising:
2 calculating a new partial CRC corresponding to the cell
3 payload.

1 13. The method of claim 11 further comprising:
2 determining whether the cell payload includes an end of
3 payload data unit marker; and

4 copying a second cell payload from the input buffer into the
5 reassembly buffer when retrieved cell payload does not include the
6 end of payload data unit marker.

1 ~~SUB~~
2 ~~14.~~ A program storage device readable by a machine tangibly
3 embodying a program of instructions executable by a machine to
4 perform method steps for reassembly ATM data, the program
5 comprising:
6 a first code section to receive a stream including a
7 plurality of protocol data units without interrupt in an input
8 buffer, each protocol data unit including a plurality of ATM
9 cells.

1 15. The program storage device of claim 14 further
2 comprising:
3 a second code section to retrieve ATM cells from the input
4 buffer until all data corresponding to a payload data unit is
5 retrieved and checking a CRC to determine whether data was
6 received without error.

1 ~~SUB~~
2 ~~16.~~ The program storage device of claim 14 further
3 comprises:
4 a second section to copy a cell payload from the input buffer
5 into a reassembly buffer.